IN THE CLAIMS:

Rewrite the pending claims as follows:

37. (Previously presented) An apparatus for converting an organometallic precursor material to form a metal-containing film adherent to a substrate, comprising:

a load station to store the substrate before processing;

a transfer device to deliver the substrate between stations;

a coating station wherein the substrate is coated with a sufficient amount of the organometallic precursor material to coat at least a portion of the substrate, wherein the precursor material upon exposure to sufficient energy forms a metal-containing layer adherent to the substrate;

a pre-convert station having a pre-conversion-energy generator adapted to expose at least portions of the precursor material to a pre-conversion energy exposure dose of such intensity and duration such that the exposed pre-converted precursor material is not converted to a degree sufficient to impair pattern resolution;

a pattern convert station having a conversion-energy generator adapted to expose portions of the pre-converted precursor material to a patterned conversion energy dose to form a metal-containing pattern adherent to the substrate.

38. (Previously presented) The apparatus of claim 37, wherein the pre-conversion-energy generator comprises a heat source, a light source, or a combination thereof; and the conversion-energy generator comprises a light source, an electron beam source, an ion beam source, or a combination thereof.

39. (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a light source; and the conversion-energy generator comprises a light source.

40. (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator and the conversion-energy generator comprises a light source, wherein the light source emits light having a wavelength from about 150 nm to about 600 nm.

41. (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a light source; and the conversion-energy generator comprises a coherent light source.

42. (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a broadband light source; and the conversion-energy generator comprises a light source.

43. (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a light source; and the conversion-energy generator comprises a broadband light source.

44. (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a light source; and the conversion-energy generator comprises an electron beam source.

45. (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a light source; and the conversion-energy generator comprises an ion beam source.

46. (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a heat source; and the conversion-energy generator comprises a light source.

47. (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a heat source; and the conversion-energy generator comprises a coherent light source.

48. (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a heat source; and the conversion-energy generator comprises a broadband light source.

49. (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a heat source; and the conversion-energy generator comprises an electron beam source.

50. (Previously presented) The apparatus of claim 38, wherein the pre-conversion-energy generator comprises a heat source; and the conversion-energy generator comprises an ion beam source.

51. (Withdrawn) The apparatus of claim 38, wherein the apparatus comprises a plurality of pre-convert stations arranged in parallel before a pattern convert station.

52. (Previously presented) The apparatus of claim 38, wherein the apparatus comprises a plurality of pattern convert stations arranged in parallel after a pre-convert station.

53. (Previously presented) The apparatus of claim 38, wherein the apparatus comprises a plurality of pattern convert stations arranged in series after a plurality of pre-convert stations.

54. (Previously presented) An apparatus for converting an organometallic precursor material to a metal-containing film adherent to a substrate, comprising:

a load station to store the substrate before processing;

a means of delivering the substrate between processing steps;

a means for coating the substrate with a sufficient amount of the organometallic precursor material to coat at least a portion of the substrate, wherein the precursor material upon exposure to sufficient energy forms a metal-containing layer adherent to the substrate;

a means for pre-converting at least a portion of the precursor material such that the pre-converted precursor material is not converted to a degree sufficient to impair pattern resolution;

a means for pattern converting a portion of the pre-converted precursor material to form a metal-containing pattern adherent to the substrate; and

a means for developing the metal-containing pattern.

55. (Previously presented) An apparatus for converting an organometallic precursor material to form a metal-containing film adherent to a substrate, comprising:

a load station to store the substrate before processing;

a transfer device to deliver the substrate between stations;

a coating station wherein the substrate is coated with a sufficient amount of the organometallic precursor material to coat at least a portion of the substrate, wherein the precursor material upon exposure to sufficient energy forms a metal-containing layer adherent to the substrate;

a pre-convert station having a pre-conversion-energy generator adapted to expose at least portions of the precursor material to a pre-conversion energy exposure dose of such intensity and duration such that the exposed pre-converted precursor material is not converted to a degree sufficient to impair pattern resolution;

a first pattern convert station having a first conversion-energy generator adapted to expose portions of the pre-converted precursor material to a first patterned conversion energy dose to form a first metal-containing pattern adherent to the substrate; and

a second pattern convert station having a second conversion-energy generator adapted to expose portions of the pre-converted precursor material to a second patterned conversion energy dose to form a second metal-containing pattern adherent to the substrate.

56. (Previously presented) The apparatus of claim 55, wherein the pre-conversion-energy generator comprises a heat source, a light source, or a combination thereof; the first conversion-energy generator comprises a light source, an electron beam source, an ion beam source, or a combination thereof, and the second conversion-energy generator comprises a light source, an electron beam source, an ion beam source, or a combination thereof.

57. (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a light source; and at least one conversion-energy generator comprises a light source.

58. (Previously presented) The apparatus of claim 56, wherein at least one conversion-energy generator comprises a light source, wherein the light source emits light having a wavelength from about 150 nm to about 600 nm.

59. (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a light source; and at least one conversion-energy generator comprises a coherent light source.

60. (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a broadband light source; and at least one conversion-energy generator comprises a light source.

61. (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a light source; and at least one conversion-energy generator comprises an electron beam source.

62. (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a light source; and at least one conversion-energy generator comprises an ion beam source.

63. (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a heat source; and at least one conversion-energy generator comprises a light source.

64. (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a heat source; and at least one conversion-energy generator comprises a coherent light source.

65. (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a heat source; and at least one conversion-energy generator comprises a broadband light source.

66. (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a heat source; and at least one conversion-energy generator comprises an electron beam source.

67. (Previously presented) The apparatus of claim 56, wherein the pre-conversion-energy generator comprises a heat source; and at least one conversion-energy generator comprises an ion beam source.

68. (Previously presented) The apparatus of claim 56, wherein the second conversion-energy generator is different than the first conversion-energy generator.

69. (Previously presented) The apparatus of claim 56, wherein the second conversion-energy generator is the same as the first conversion-energy generator.

70. (Previously presented) The apparatus of claim 55, wherein the first pattern convert station contains the pre-converted substrate in a first atmosphere, and wherein the second pattern convert station contains the pre-converted substrate in a second atmosphere, wherein the first atmosphere is different than the second atmosphere.

71. (Previously presented) The apparatus of claim 56, wherein the first pattern convert station contains the pre-converted substrate in a first atmosphere, and wherein the second pattern convert station contains the pre-converted substrate in a second atmosphere, wherein the first atmosphere is different than the second atmosphere.

72. (Previously presented) The apparatus of claim 55, wherein the apparatus comprises a plurality of first and second pattern convert station arranged in parallel after a pre-convert station.

73. (Previously presented) The apparatus of claim 55, wherein the apparatus comprises a plurality of pattern convert stations arranged in parallel after a pre-convert station.

74. (Previously presented) The apparatus of claim 55, wherein the apparatus comprises a plurality of pattern convert stations arranged in series after a plurality of pre-convert stations.

75. (Previously presented) An apparatus for converting an organometallic precursor material to a metal-containing film adherent to a substrate, comprising:

a load station to store the substrate before processing;

a means of delivering the substrate between processing steps;

a means for coating the substrate with a sufficient amount of the organometallic precursor material to coat at least a portion of the substrate, wherein the precursor material upon exposure to sufficient energy forms a metal-containing material adherent to the substrate;

a means for pre-converting the coated substrate such that the pre-converted precursor material is not converted to a degree sufficient to impair pattern resolution;

a first means for pattern converting a first portion of the pre-converted material to form a first metal-containing pattern adherent to the substrate; and

a second means for pattern converting a second portion of the pre-converted material to form a second metal-containing pattern adherent to the substrate; and

a means for developing the metal-containing pattern.